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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/521,563

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Detlef Knebel

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SMITH PATENT OFFICE

1901 PENNSYLVANIA AVENUE N W

SUITE 901

WASHINGTON, DC 20006

EXAMINER

LOGIE, MICHAEL J

ART UNIT

PAPER NUMBER

2881

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/521,563	<b>Applicant(s)</b> KNEBEL ET AL.	
	<b>Examiner</b> MICHAEL J. LOGIE	<b>Art Unit</b> 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 12-17 is/are allowed.
- 6) ☒ Claim(s) 7-9 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, seen in pages 9-11, filed November 13, 2007, with respect to claims 1-22 have been fully considered and are persuasive. The rejection of August 10, 2007 has been withdrawn.

### ***Response to Amendment***

An "Amendment" was received on November 13, 2007, in response to Office Action of August 10, 2007. Claims 12-22 have been added. Claims 1-22 are pending.

### ***Allowable Subject Matter***

Claims 1-6 and 12-17 are allowed.

The following is an examiner's statement of reasons for allowance:

In regards to claim 1, prior art fails to disclose an apparatus for a scanning microscope, in particular a scanning force microscope, comprising a measurement probe which defines a near field, and having a scanning unit which allows the measurement probe to move relative to a sample in all three spatial directions, in conjunction with a mass spectrometer with an ionization unit, an extraction unit and an analysis unit, wherein the measurement probe has a hollow tip so that the near field of the measurement probe can be used by the ionization unit in such a way that ions are formed only in the near field of the measurement probe, and the shape of the

Art Unit: 2881

measurement probe allows an essentially axially symmetrical field distribution of the extraction unit with respect to the axis of the analysis unit.

Claims 2-6 are allowed by virtue of their dependencies on the independent claim 1.

In regards to claim 12, prior art fails to disclose an apparatus for a scanning microscope, comprising a measurement probe which defines a near field and a scanning unit which allows the measurement probe to move relative to a sample in all three spatial directions in conjunction with a mass spectrometer with an ionization unit, an extraction unit and an analysis unit, wherein the measurement probe has a hollow tip so that the near field of the measurement probe can be used by the ionization unit such that ions are formed only in the near field of the measurement probe, and a shape of the measurement probe allows an essentially axially symmetrical field distribution of the extraction unit with respect to an axis of the analysis unit.

Claims 13-17 are allowed by virtue of their dependencies on the independent claim 12.

### ***Claim Objections***

Claims 10, 11, 21 and 22 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 7-9 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Henderson (US pgPub 2003/0134273).

In regards to claims 7 and 18, Henderson teaches a method for high-resolution examination of a measurement sample using a combined scanning probe microscope, in particular a scanning force microscope (fig. 1), wherein the scanning probe microscope is first of all used to record an image of the measurement sample, in particular of the topography of the measurement sample ([0052]), and wherein a mass spectrometer is then used for destructive, chemical characterization of at least subareas of sections of the measurement sample which are covered by the image ([0068]).

In regards to claims 8 and 19, Henderson teaches the method as claimed in claim 7, wherein the selected areas are chosen successively such that the entire area imaged by the scanning probe microscope is analyzed, thus additionally resulting in a chemical image of the sample ([0068]).

In regards to claims 9 and 20, Henderson teaches the method as claimed in claim 7, wherein further ablation of the measurement sample leads to high-resolution

Art Unit: 2881

depth information ([0068], it is inherent that further ablation of a sample leads to high-resolution depth information, since the more desorption of the sample to the mass spectrometer results in a higher molecular image).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See non claim rejection references listed in the references cited form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Logie whose telephone number is 571-270-1616. The examiner can normally be reached on 7:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2881

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ml

/Robert Kim/

Supervisory Patent Examiner, Art Unit 2881